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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Matthew W Stavish
Liniak Berenato longacre & White
6550 Rock Spring Drive
Suite 240
Bethesda, MD 20817

EXAMINER

CIRIC, LJILJANA V

ART UNIT

PAPER NUMBER

3743

DATE MAILED: 01/15/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.
09/614,586

Applicant(s)
Elliot et al.

Examiner
Ljiljana V. Ciric *LVC*

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on Nov 4, 2002
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above, claim(s) 3-6 and 12-16 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 2, 7-11, and 17-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on Jul 12, 2000 is/are a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- *See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____ 6) ☐ Other:

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DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on November 4, 2002 has been entered.

2. Claims 1 through 23 remain in the application, of which claims 1, 2, 7 through 11, and 17 through 23 have been amended, and of which claims 3 through 6 and 12 through 16 remain withdrawn from consideration as previously indicated.

Response to Arguments

3. Applicant's arguments filed on November 4, 2002 have been fully considered but they are not persuasive.

Although applicant states that the "claims have been amended to address all of the Examiner's comments and objections", not all of the issues raised in conjunction with the rejection of the claims under 35 U.S.C. 112, second paragraph, as cited in the previous Office action have been addressed. In particular, the claims are still generally narrative and indefinite, failing to conform with current U.S. practice. They appear to be a literal translation into English

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from a foreign document, with at least some of the claims continuing to contain grammatical and idiomatic informalities which render the claims unclear and indefinite.

Applicant's arguments with respect to the previously made rejection of claims 1, 2, 7, 11, and 20 through 23 as being anticipated by *Kenny et al.* under 35 U.S.C. 102(b) and of claim 8 as being unpatentable over *Kenny et al.* in view of *Loup* under 35 U.S.C. 103(a) have been considered but are moot in view of the new ground(s) of rejection set forth below.

Nevertheless, in response to applicant's arguments that the claim limitations differentiate from the prior art in that the claim limitations denote "a single exchanger", applicant is respectfully reminded once again that claims in a pending application should be given their broadest reasonable interpretation. *In re Pearson*, 181 USPQ 641 (CCPA 1974). Furthermore, in response to applicant's reliance on the function of a "gas cooler" as recited in the claims of the instant invention to differentiate the same from an "evaporator" as cited in an applied reference, applicant is also once again reminded that not only should the claims in a pending application be given their broadest reasonable interpretation (i.e., a gas cooler and an evaporator are both heat exchangers and as such read on each other), but also that claims directed to an apparatus must be distinguished from the prior art in terms of structure rather than function. *In re Danly*, 263 F.2d 844, 847, 120 USPQ 528, 531 (CCPA 1959). Cooling and evaporation are functions of heat exchangers, and hence, absent the recitation of additional and specific structure, the recitation of either a cooler or an evaporator reads broadly, as required, on generally any heat exchanger. Also, "[A]pparatus

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claims cover what a device *is*, not what a device *does*. (Emphasis in original). Hewlett-Packard Co. v. Bausch & Lomb Inc., 909 F.2d 1464, 1469 15 USPQ2d 1525, 1528 (Fed. Cir. 1990).

Drawings

4. Applicant's amendment and arguments filed on November 4, 2002 have obviated the objection to the drawings under 37 CFR 1.83(a) as cited in the previous Office action.

Specification

- 5. Receipt and entry of the amended abstract are hereby acknowledged.
- 6. Receipt and entry of the amended title are hereby acknowledged.

Claim Rejections - 35 U.S.C. § 112

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. Claims 1, 2, 7 through 11, and 17 through 23 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The claims are still generally narrative and indefinite, failing to conform with current U.S. practice. They appear to be a literal translation into English from a foreign document, with at least some of the claims containing grammatical and idiomatic informalities which render the claims unclear and indefinite.

For example, with regard to claim 2 as written, the limitations "between the heat-carrying fluid and a refrigerant fluid *of a main loop flowing through the main heat-carrying fluid*

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exchanger” are not clear as written. First of all, is a main loop being positively recited and claimed or not? Second of all, as written, the limitations appear to read as if the main loop is flowing through the main heat-carrying fluid exchanger.

With regard to claim 8 as written, it is not clear to which elements the term “which” in line 2 of the claim refers. Does “which” refer to the respective collectors, or to the respective fluids? Recommend replacing the term “which” with a direct recitation of whichever elements are referred to thereby.

The limitations following “wherein” in claim 9 are still written in a run-on manner and are thus still not readily comprehensible as written, thereby rendering indefinite claim 9 and claims 10 and 11 depending therefrom.

The limitations “wherein *circulation of the refrigerant fluid and of the heat-carrying fluid currents are* at least partly counter to each other” are not clear as written due to grammatical informalities and also because there is insufficient antecedent basis in the claims for the limitations “the refrigerant fluid and...the heat-carrying fluid *currents*” as recited in the claim.

The limitations “the refrigerant-fluid collector *exhibits an element of volume forming a refrigerant-fluid bottle for the thermal loop*” as recited in claim 11 are unclear as written due to various idiomatic informalities.

The limitations following “wherein” in each of claims 17 and 18 are also still written in a run-on manner and are thus not readily comprehensible as written, thereby rendering these claims, along with claim 19 depending from claim 18, indefinite. Also, claim 17 recites “a second routing

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circuit” and claim 18 recites “a third routing circuit”, implying that there should also be “a first routing circuit”, but none appears to be recited in either claim 17 or 18 or in claim 1 from which these claims depend. Finally, with regard to claim 17 as written, the limitations “the heat pump including the main fluid-carrying heat exchanger as gas cooler *thereof* and the additional evaporator as an evaporator *thereof*” are particularly unclear. To which element(s) does the term “thereof” refer in each case? Also, claim 1, from which claim 17 depends, already recites the main fluid-carrying heat exchanger as including a gas cooler. Is or is not the gas cooler recited in claim 17 a double recitation of the gas cooler previously recited in claim 1?

The limitations following “wherein” in claim 19 are also particularly unclear as written. What is meant by “*wherein further* comprising a pressure-reducing valve arranged downstream of the main fluid-carrying heat exchanger” as recited in the claim? Some words appear to have possibly been inadvertently omitted from the claim. Also, is the pressure-reducing valve in addition to, or the same as, the pressure-reducing valve recited in line 2 of claim 1 from which claim 19 depends via claim 18?

The limitations “*either with at least one of* cooling water and overcooled water” appearing in claim 20 are generally incomprehensible as written.

With regard to claim 22 as written, it is not clear whether the limitation “in which the main fluid-carrying heat exchanger is isolated from an airflow” is intended to mean that the main fluid-carrying heat exchanger is isolated from any and all airflows or to a particular airflow.

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Claims 1, 2, 7 through 11, and 17 through 23 are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential structural cooperative relationships of elements, such omission amounting to a gap between the necessary structural connections. See MPEP § 2172.01. The omitted structural cooperative relationships are, for example: the ones between the refrigerating compressor, the pressure-reducing valve, the evaporator, and the main fluid-carrying heat exchanger as recited in claim 1; the additional evaporator, the second routing circuit, and the heat pump as recited in claim 17; the third routing circuit and the heating loop as recited in claim 18; and, the mixing flap and the main fluid-carrying heat exchanger.

The above is a comprehensive and generally indicative, but not necessarily an exhaustive, list of 35 U.S.C. 112, second paragraph, problems. Applicant is therefore advised to carefully review all of the claims for additional problems. Correction is required of all of the 35 U.S.C. 112, second paragraph problems, whether or not these were particularly pointed out above.

Claim Rejections - 35 U.S.C. § 102

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

10. As best can be understood in view of the indefiniteness of the claims, claims 1, 2, 7, 8, 18, and 19 are rejected under 35 U.S.C. 102(b) as being anticipated by *Wolf*.

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Wolf discloses a vehicular heating/air conditioning installation essentially as claimed, including: a refrigerating compressor 32, a pressure reducing valve 44, an evaporator 46, and a combined heat exchanger 10 comprising a gas cooler/condenser section 30 and a heating element/radiator section 25 grouped together into a single heat exchanger or module 10, where the pressure reducing valve 44 is arranged downstream of the heat exchanger 10. The single heat exchanger or module 10 includes two collectors 20 and 26 arranged at opposite ends of the heat exchanger 10, and also includes the various heat transfer surfaces as cited in claims 2 and 7 of the instant application [see Fig. 4 and Fig. 7 of *Wolf*].

The reference thus reads on the claims.

11. The non-application of art against claims 9 through 11, 17, and 20 through 23 should not be construed as an indication that the claims contain allowable subject matter but rather that the claims could not be examined on the merits due to indefiniteness.

Conclusion

12. The following additional prior art made of record and not relied upon is considered pertinent to applicant's disclosure. *Halstead et al.* and *Halstead* are related to the above-cited *Wolf* reference. *Struss et al.*, *Shinmura*, *Kadle*, *Nakamura et al.*, *Sugimoto et al.*, *Ozaki et al.*, *Sumida*, *Volkswagenwerk AG*, *Mitsui Zosen K.K.*, *Showa Alum Corp.*, *Valeo*, and *Ford Motor Company Limited* each discloses a combined multi-fluid heat exchanger similar to the one of the instant invention. *Sumikawa et al.* and *Ghodbane et al.* each discloses a vehicular air conditioning system including refrigeration.

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13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ljiljana (Lil) V. Ciric, whose telephone number is (703) 308-3925. While she works a flexible schedule that varies from day to day and from week to week, Examiner Ciric may generally be reached at the Office during the work week between the hours of 10 a.m. and 6 p.m. ET.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Henry Bennett, can be reached on (703) 308-0101. The fax phone number is (703) 305-3463.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0861.

lvc

January 9, 2003



LJILJANA V. CIRIC
PRIMARY EXAMINER
ART UNIT 3743